

Computation Offloading Scenario with Multiple Access Points

Master Thesis / Bachelor Thesis / Project Seminar

Mobile devices (smartphones, laptops,...) are usually limited by their battery capacity or the computation power of their processor. Computation Offloading offers the ability to compute tasks at a distant server with more resources. Mobile cloud computing (MCC) and mobile edge computing (MEC) are the proposed alternatives to local computation.

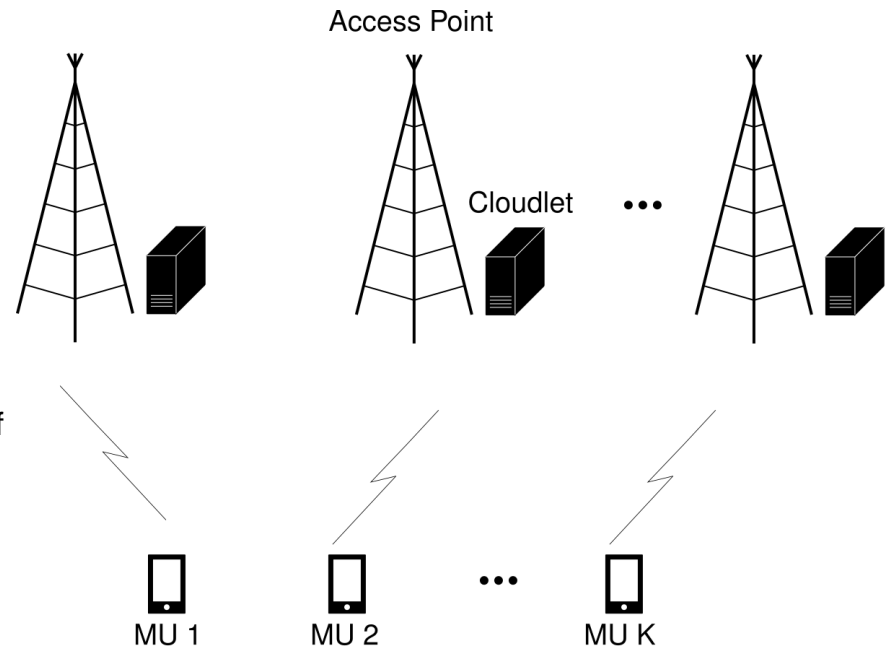
This project seminar or thesis should evaluate the assignment of multiple mobile devices to multiple wireless access points and multiple computation servers (cloudlets). The mobile devices shall decide, whether offloading their task is beneficial in terms of saving energy. Simultaneously, the communication and computation resources in the network have to be shared among all offloading devices.

Tasks:

- Understand the basics of optimization and game theory
- Review the related works
- Design new algorithms considering the mentioned parameters
- Evaluate the performance of the algorithms by simulation

Requirements:

- High motivation in doing research in the field of communications
- Basic knowledge about principals of communications
- Programming skills (in best case already with MATLAB)



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